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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,705	02/01/2005	Andre Van Dyk	2004_1032A	4374

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EXAMINER	
HOLMAN, JOHN D	
ART UNIT	**PAPER NUMBER**
3643	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/500,705	VAN DYK ET AL.	
	Examiner	Art Unit	
	John D. Holman	3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *55-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *55-67* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 55-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Watson (US 5765923).

Regarding claim 55, Watson discloses an apparatus comprising a first cartridge (25) having a base (27) and a sidewall, a propellant (30) inside the enclosure, a first pressure wave deforming means (29) comprising a junction between the side wall of the first cartridge (25) and the base (27) of the first cartridge, and a second pressure wave deforming means (24) comprising at least one member disposed inside the first cartridge (25) and away from the base (27). See figure 3. The first and second pressure wave deforming means as disclosed by Watson fulfills the means plus function requirement of promoting localized cracking or fracture of a rock surface in a locality of the pressure wave deforming means since it is stated in the specification that deforming means may be "shaping the cartridge at one or more regions to induce pressure wave deformation, inserting or forming one or more wave deforming members on an inner or outer side of the cartridge, and by locating one or more wave deforming members inside

the cartridge." Also, the term "locality" is broad and is interpreted as it's broadest definition.

Regarding claim 56, Watson discloses an apparatus wherein the first cartridge (5) is shaped to direct a wave of pressure towards a periphery of the base. See figure 1 and column 2, line 50-56.

Regarding claim 57, Watson discloses an apparatus comprising a charge (30) disposed inside the first cartridge (5). See figure 1 and column 1, line 59-63.

Regarding claim 58, Watson discloses an apparatus wherein the first cartridge (25) is made from a plastically deformable material. See column 12, line 54-60.

Regarding claim 59, Watson discloses an apparatus wherein the second pressure wave deforming means (24) is made from a material having greater density than the density of the propellant. See column 4, line 67 and column 5, line 1.

Regarding claim 60, Watson discloses an apparatus wherein the member that is made from a material that has a density greater than the density of the propellant is turned into a high pressure jet. See column 9, line 65-67.

Regarding claim 61, Watson discloses an apparatus where in an explosive which acts directly on the member that is made from a material which has a density greater than the density of the propellant is used to generate a high pressure jet of the material. See column 9, line 65-67.

Regarding claim 62, Watson discloses an apparatus comprising an explosive (30) and a control unit, which initiates the propellant at a first predetermined time and

detonates the explosive at a second predetermined time. See figure 1 and column 2, lines 43-56.

Regarding claim 63, Watson discloses an apparatus comprising a first and second initiators for initiating the propellant at a respective first and second point within the first cartridge. See column 2, line 50-56.

Regarding claim 64, Watson discloses an apparatus comprising a first cartridge (25), a first propellant (30), a second cartridge (34), a second propellant (39), a first pressure wave deforming means (29), a second pressure wave deforming means (24), wherein the first cartridge (25) includes a first initiator (39), wherein the second cartridge (34) includes a second initiator (35), and wherein the first and second cartridges are positioned in an assembly with the first (39) and the second (35) initiators disposed at opposed remote points in the assembly. See figure 3. The first and second pressure wave deforming means as disclosed by Watson fulfills the means plus function requirement of promoting localized cracking or fracture of a rock surface in a locality of the pressure wave deforming means since it is stated in the specification that deforming means may be "shaping the cartridge at one or more regions to induce pressure wave deformation, inserting or forming one or more wave deforming members on an inner or outer side of the cartridge, and by locating one or more wave deforming members inside the cartridge." Also, the term "locality" is broad and is interpreted as it's broadest definition.

Regarding claim 65, Watson discloses an apparatus wherein the first cartridge (25) extends in a longitudinal direction from a base of the first cartridge to a top portion of the first cartridge, the second cartridge (34) extends in a longitudinal direction from a base of the second cartridge to a top portion of the second cartridge, and wherein the first cartridge (25) is separated from the second cartridge (34) by a predetermined distance in the longitudinal direction. See figure 3.

Regarding claim 66, Watson discloses an apparatus wherein the first cartridge (25) is separated from the second cartridge (34) in the longitudinal direction by stemming material. See figure 3. The term "stemming material" is not sufficiently defined in the specification as to allow one of ordinary skill in the art to determine what material is actually being used. Therefore, the Examiner considers stemming material as any material located in a space. In this case, the propellant (30) is a material separating the first and second cartridges and is considered a stemming material.

Regarding claim 67, Watson discloses an apparatus wherein the first cartridge (25) extends in a longitudinal direction from a base of the first cartridge to a top portion of the first cartridge, and wherein the first pressure wave deforming means (29) and the second pressure deforming means (24) are located at different positions along the longitudinal direction of the first cartridge. See figure 3.

Regarding claim 68, Watson discloses an apparatus wherein the second pressure wave deforming means (24) is a ring-shaped member. See figure 3. The deforming means is a ring-shaped because it is circular with a hole through.

Response to Arguments

Applicant's arguments filed 12/18/2006 have been fully considered but they are not persuasive.

Regarding the argument that Watson's separation disk 29 does not correspond to a first pressure wave deforming means to promote localized cracking or fracture of a rock surface in a locality of the first pressure wave deforming means, the present applicant stated in the specification a number of means to deform a pressure wave and Watson fulfilled the requirement by inserting one or more deforming members on an inner side of the cartridge, which is a disclosed means of deforming in the present application. As far the locality of the localized cracking, applicant is too broad in describing wherein a locality of the pressure wave deforming means would be and is therefore is up for interpretation by the Examiner.

Regarding the argument that Watson's cartridge disk 24 does not correspond to a second pressure wave deforming means to promote localized cracking or fracture of a rock surface in a locality of the second pressure wave deforming means, the present applicant stated in the specification a number of means to deform a pressure wave and Watson fulfilled the requirement by inserting one or more deforming members on an inner side of the cartridge, which is a disclosed means of deforming in the present application. As far the locality of the localized cracking, applicant is too broad in describing wherein a locality of the pressure wave deforming means would be and is therefore is up for interpretation by the Examiner.

Regarding the argument that the Examiner has taken the position that the propellant of Watson corresponds to both the "propellant" and "explosive", propellant is define by *American Heritage Dictionary* as "an explosive charge." Therefore, it is both a propellant and an explosive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Holman whose telephone number is 571 272-2754. The examiner can normally be reached on Monday through Friday 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDH

PETER M. POON
SUPERVISORY PATENT EXAMINER

3/1/07